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ART 34 ADT.

We claim:-

1. An automated method for classifying sheet-like materials,  
5 comprising the following steps:
  - (a) preparation of a material,
  - (b) optoelectronic recording of the surface of the material,  
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  - (c) determination of the number of defects,
  - (d) determination of the volume of defects  
15 and subsequent classification of the sheet-like materials according to number and volume of defects.
2. A method as claimed in claim 1, wherein the sheet-like  
20 material is leather.
3. A method as claimed in claim 1 or 2, wherein one or more  
cameras are used in step (b).
4. A method as claimed in any of claims 1 to 3, wherein one or  
25 more sensor units, mounted on a movable unit and computer-controlled, are moved over the prepared surface.
5. A method as claimed in any of claims 1 to 4, wherein small  
30 projections of the material are selectively cut off by means of a cutter, which may likewise be mounted on the movable unit.
6. A method for classifying and upgrading sheet-like materials,  
35 wherein, after steps (a) to (d) as claimed in any of claims 1 to 5, in a further step
  - (e) defects in the form of cavities are repaired using one or more binders.
- 40 7. A method as claimed in claim 6, wherein the sheet-like material is leather.

8. A method as claimed in claim 6 or 7, wherein the binder or binders is or are selected from physically curable binders, thermally curable binders or binders curable by actinic radiation.
- 5 9. A method as claimed in any of claims 6 to 8, wherein radiation-curable binders are selected from acrylate-containing, vinyl-containing, urethane-containing and epoxide-containing monomers, prepolymers and polymers and mixtures thereof.
- 10 10. A method as claimed in any of claims 6 to 9, wherein, in step (e), the binder or binders is or are selectively introduced into the cavities determined in steps (b) to (d) and then
- 15 cured.
11. A method as claimed in claim 10, wherein, in step (e), in each case from 95 to 105% by volume, based on the volume of cavities in the leather and in each case based on the solids
- 20 content of the cured binder, of binder are introduced into the cavities determined and calculated in steps (b) to (d).
12. A method as claimed in any of claims 6 to 10, wherein the binder or binders is or are applied over a large area of the
- 25 leather, then cured selectively in the area of the rawhide defects and/or of the superficial manufacturing defects and finally the uncured binder is removed.
13. A method as claimed in any of claims 6 to 12, wherein one or
- 30 more additives are added to the binder.
14. A method as claimed in any of claims 6 to 13, wherein leather having coarse surface defects is used as a starting material and, in step (e), thickener is added to the binder and the
- 35 leather is stuccoed with reduced resolution.
15. A sheet-like material obtainable by a method as claimed in claim 6.
- 40 16. A leather having natural grain, obtainable by a method as claimed in any of claims 6 to 14.
17. An apparatus for carrying out a method as claimed in any of claims 1 to 5, comprising one or more sensor units, one or
- 45 more movable units on which the sensor unit or sensor units is or are mounted, optionally one or more light sources, the sensor unit or sensor units, the movable unit or movable

units and the optionally present light source or light sources being connected to a computer which controls the components of the apparatus.

- 5 18. An apparatus as claimed in claim 17, furthermore comprising a  
nozzle head which is mounted on the same or a further movable  
unit, the further movable unit being connected to the  
computer and the nozzle head being connected to the computer  
and a reservoir of binder, the computer controlling the  
10 nozzle head and the optionally present further movable unit.

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